Derrick Kyei
Software Engineer (Cloud, Data & AI)

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SUMMARY

Software Engineer with 5 years of experience delivering scalable software, data, and cloud-native solutions at enterprise scale. Specialized in Azure DevOps, data engineering, and applied AI, with hands-on experience in modernizing legacy systems and deploying analytics pipelines. Leveraging Deep Learning frameworks for predictive analytics and natural language processing. Committed to building secure, scalable infrastructure while utilizing Machine Learning best practices to drive operational efficiency and data-driven decision making.

EDUCATION:

University of the Cumberlands   **Williamsburg, KY**
Master of Science, Artificial Intelligence (**GPA**: 4.00)   August 2025 - Expected August 2026

The University of Georgia - Franklin College of Arts and Sciences   **Athens, GA**
Bachelor of Science, Computer Science (**GPA**: 3.58)   January 2018 - December 2019
Honors & Awards: HOPE Scholarship Recipient

Georgia State University - Perimeter College   **Decatur, GA**
Associate of Science, Computer Science (**GPA**: 3.79)   January 2015 - December 2017
Honors & Awards: Phi Theta Kappa Honor Society, National Society of Collegiate Scholars

CERTIFICATIONS:

Microsoft Azure Fundamentals (AZ-900)

TECHNICAL SKILLS:

Cloud & Infrastructure: Microsoft Azure, Azure DevOps, CI/CD Pipelines, Terraform, PowerShell, Bash, Linux/Unix
Data & AI: PySpark, Databricks, Delta Lake, SQL, ETL Pipelines, TensorFlow/Keras, Data Modeling
Programming & Backend: Java, Python, C#, C++, TypeScript, JavaScript, Node.js, REST APIs
Frontend: AngularJS, Angular, HTML, CSS
Tools & Methodologies: Git, GitHub, Jira, PostgreSQL, Maven/Gradle, Agile/Scrum

INDEPENDENT RESEARCH:

Independent Research & Technical Development (Self-Directed)   March 2024 - August 2025
- Built and deployed a public portfolio documenting personal milestones in software development, AI/ML implementations, and continuous learning.
- Engineered Generative Adversarial Networks (GANs) using TensorFlow and optimized model weights, resulting in improved data generation accuracy.
- Conducted comprehensive research into Deep Learning frameworks and Neural Network scalability to define best practices for production-ready AI

PROFESSIONAL EXPERIENCE:

Databricks   **Alpharetta, GA**
Senior Software Engineer - AT&T Inc.   January 2023 - March 2024
- Developed and maintained PySpark ETL pipelines within the Delta Live Tables (DLT) framework to enhance data reliability and support analytics and AI workloads. Automated medallion architecture (bronze, silver, gold) for more efficient extract, transform, and load processes.
- Delivered technical demos and walkthroughs to development teams and business stakeholders, communicating system behavior, outcomes, and implementation impact.

- Delivered end-to-end agile delivery of production data pipelines, including requirements analysis, architectural design, development, testing, deployment, and ongoing operational support.
- Conducted peer code reviews to enforce code quality, performance optimization, and secure software engineering principles.

Azure DevOps   **Alpharetta, GA**
Senior Specialist Software Engineer - AT&T Inc.   November 2021 - December 2022
- Built and automated CI/CD pipelines supporting enterprise applications, improving deployment consistency and release velocity.
- Designed Azure infrastructure using Terraform, implementing infrastructure-as-code and auto-scaling configurations.
- Supported secure application deployments by integrating Azure Key Vault for secrets management.
- Delivered end-to-end agile delivery of production data pipelines, including requirements analysis, architectural design, development, testing, deployment, and ongoing operational support.
- Conducted code and pipeline reviews to ensure adherence to enterprise quality, security, and maintainability standards

HR Technology   **Alpharetta, GA**
Software Engineer - AT&T Inc.   March 2021 - November 2021
- Modernized legacy applications by migrating ColdFusion systems to Angular and Node.js hosted in AWS cloud environments.
- Implemented application features and defect fixes in accordance with secure coding standards and enterprise architecture guidelines.
- Collaborated with product owners and business stakeholders to clarify requirements and translate business needs into technical solutions.

Project Atlas   **Alpharetta, GA**
Software Engineer - AT&T Inc.   January 2020 - March 2021
- Worked with senior engineers to diagnose and resolve application performance and system integration issues.
- Participated in application design discussions and implemented features aligned with approved architectural direction.
- Documented application behavior, implementation details, and support procedures to improve maintainability and team knowledge sharing.

TDP App   **Atlanta, GA**
Software Engineer Intern - AT&T Inc.   June 2019 - August 2019
- Developed a full-stack social communication application for TDP utilizing AngularJS and NodeJS, resulting in improved communication and collaboration among users.
- Built a 5G-enabled virtual reality application using C# and Agile methodologies, addressing customer churn and enhancing customer service through proactive needs analysis.

LEADERSHIP:

Diversity, Equity & Inclusion   January 2020 - November 2021
- Led Diversity, Equity, and Inclusion initiatives at AT&T with event planning and internal communications.

PROJECTS:

Word Embedding
- Built and trained word embedding skip-gram models using TensorFlow/Keras, applying negative sampling and tf.data pipelines for efficient training.
- Preprocessed Shakespeare and IMDB-like corpora with Keras text utilities (tokenization, vocabulary construction, batching) to generate training pairs. Evaluated embeddings on downstream sentiment classification, achieving ~68% test accuracy, demonstrating transfer learning competence.

Building GAN
- Designed and implemented a Generative Adversarial Network (GAN) in TensorFlow/Keras to generate realistic handwritten digits from the MNIST dataset.

- Explored variational autoencoder (VAE) reconstruction of MNIST digits, interpreting latent space organization and dimensionality reduction.

Fertilizer App
- Developed a cross-platform (iOS and Android) mobile application using React Native for calculating fertilizer dosages, incorporating user feedback gathered through rigorous testing to optimize functionality and user experience.
- Conducted user testing on the application and incorporated the results into the direction of the project.

Messenger App
- Developed a full-stack, native Android messaging application using Java and Firebase Cloud technology, demonstrating proficiency in mobile application development and cloud-based communication solutions.
- Conducted user testing and incorporated results into the direction of the project.

Movie Rating Prediction Application
- Designed and implemented a movie rating prediction system using Java and SQL, leveraging regression analysis to optimize model accuracy based on IMDB data.

Project Intercept
- Participated in Goodie Nation's Hackathon, contributing to the development of a web-based communications platform for survivors of human trafficking and to reduce violence by 40% locally and globally.